Historic, archived document

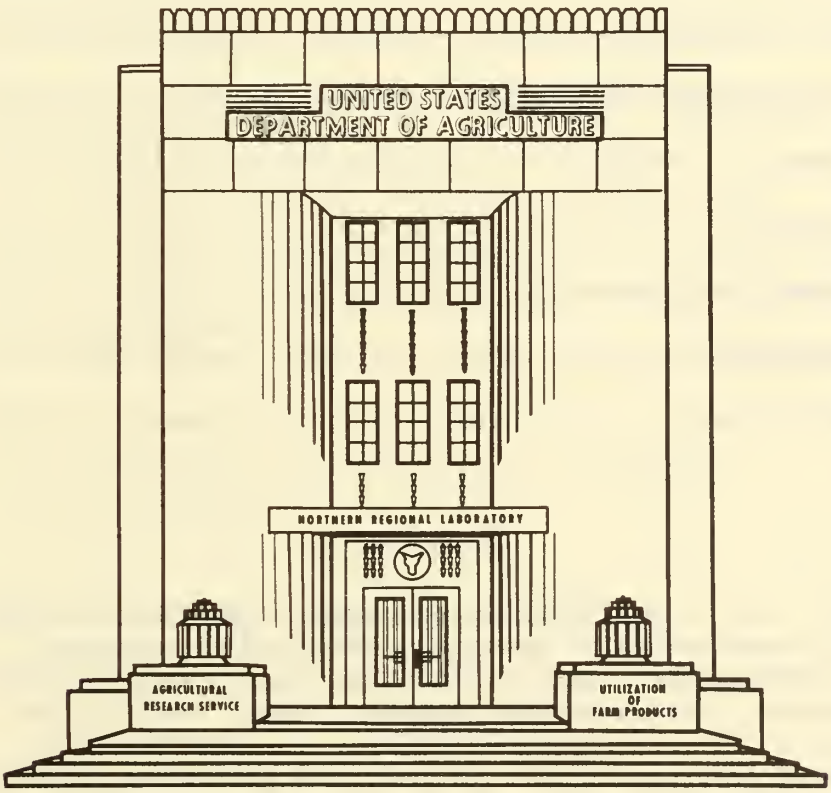
Do not assume content reflects current scientific knowledge, policies, or practices.

LIBRARY
RECEIVED
DEC 19 1962
U. S. DEPARTMENT OF AGRICULTURE

ARS-71-27
December 1962

CHEMICALLY MODIFIED OIL PRODUCTS AND INDUSTRIAL USES

A List of Publications and Patents, 1936-1961
Northern Regional Research Laboratory



Agricultural Research Service

UNITED STATES DEPARTMENT OF AGRICULTURE

CONTENTS

	Page
Publications	3
Dimerization, Isomerization, and Conjugation	3
Adducts	4
Polyesters, Polyamides, and Other Polymers	6
Vinyl Polymers	7
Oxidation and Ozonization	11
Soybean Oil Paints	13
Coatings	14
Testing Methods	16
Miscellany	17
Patents	19

This list of publications and patents represents 25 years of research work on chemically modified oil products, industrial uses, and related technology. It supersedes previous lists issued as AIC-184, Suppl. 1-6; AIC-228, Suppl. 1-6; and ARS-71-5, Suppl. 1-7. References are listed chronologically, except those pertaining to subgroups under a main heading are placed together.

Northern Utilization Research and Development Division
1815 North University Street
Peoria, Illinois

PUBLICATIONS ON CHEMICALLY MODIFIED OIL PRODUCTS AND INDUSTRIAL USES

1936-1961

[Publications marked (*) are not available for distribution. When requesting specific reprints, please order by number.]

Dimerization, Isomerization, and Conjugation

40 * SYNTHETIC OILS FROM RESIDUAL DIMERIZED FAT ACIDS.
J. C. Cowan and L. B. Falkenburg.
Oil & Soap 20(8): 153-157. August 1943.

51 * SALTS OF RESIDUAL DIMERIZED FAT ACIDS. A NEW CLASS OF RESINOUS SUBSTANCES.
J. C. Cowan and H. M. Teeter.
Ind. Eng. Chem. 36(2): 148-152. February 1944.

208 * CATALYTIC ISOMERIZATION OF VEGETABLE OILS. NICKEL CATALYSTS.
S. B. Radlove, H. M. Teeter, W. H. Bond, J. C. Cowan, and J. P. Kass.
Ind. Eng. Chem., Ind. Ed. 38(10): 997-1002. October 1946.

209 * CATALYTIC ISOMERIZATION OF VEGETABLE OILS. EVALUATION OF OILS IN BODYING, VARNISHES, AND ALKYD RESINS.
L. B. Falkenburg, A. W. Schwab, J. C. Cowan, and H. M. Teeter.
Ind. Eng. Chem., Ind. Ed. 38(10): 1002-1009. October 1946.

223 * CATALYTIC ISOMERIZATION OF VEGETABLE OILS.
S. B. Radlove, H. M. Teeter, and J. C. Cowan.
Offic. Dig. Federation Paint & Varnish Production Clubs (265): 74-84. February 1947.

357 * ISOMERIZATION REACTIONS OF DRYING OILS.
J. C. Cowan.
Ind. Eng. Chem. 41(2): 294-304. February 1949.

454 * ISOMERIZATION AND TRANS-ESTERIFICATION.
J. C. Cowan.
J. Am. Oil Chemists' Soc. 27(11): 492-499. November 1950.

753 POLYMERIZATION, COPOLYMERIZATION, AND ISOMERIZATION.
J. C. Cowan.
J. Am. Oil Chemists' Soc. 31(11): 529-535. November 1954.

1090 CYCLIZATION OF LINOLENIC ACID BY ALKALI ISOMERIZATION.
C. R. scholfield and J. C. Cowan.
J. Am. Oil Chemists' Soc. 36(12): 631-635. December 1959.

1266 LIQUID C-18 SATURATED ACIDS DERIVED FROM LINSEED OIL.
J. P. Friedrich, H. M. Teeter, J. C. Cowan, and G. E. McManis.
J. Am. Oil Chemists' Soc. 38(7): 329-332. July 1961.

146 * CATALYTIC CONJUGATION OF LINSEED AND SOYBEAN OILS.
S. B. Radlove, H. M. Teeter, and J. C. Cowan.
AIC-101. October 1945. 46 pp. [Processed]

59-C THE DETERMINATION OF CONJUGATED CIS-TRANS AND TRANS-TRANS METHYL OCTADECADIENOATES BY INFRARED SPECTROMETRY.
J. R. Chipault and J. M. Hawkins, The Hormel Institute, University of Minnesota, Austin.[1]
J. Am. Oil Chemists' Soc. 36(11): 535-539. November 1959.

75-C CONVERSION OF CONJUGATED CIS-TRANS OCTADECADIENOATES TO THE TRANS-TRANS ISOMERS.
J. R. Chipault and J. M. Hawkins, The Hormel Institute, University of Minnesota, Austin.[1]
J. Am. Oil Chemists' Soc. 37(4): 176-182. April 1960.

Adducts

98-SBL * THE REACTION OF NONCONJUGATED UNSATURATED FATTY ACID ESTERS WITH MALEIC ANHYDRIDE.
W. G. Bickford, P. Krauczunas, and D. H. Wheeler.[2]
Oil & Soap 19(2): 23-27. February 1942.

---

[1] Report of research work done by an outside agency under contract with the U.S. Department of Agriculture and supervised by the Northern Division.

[2] U.S. Regional Soybean Industrial Products Laboratory, Urbana, Ill. The chemical and engineering investigations conducted at this Laboratory were transferred to the Northern Laboratory as of July 1, 1942.

396 * SAPONIFICATION OF ADDUCTS OF MALEIC ANHYDRIDE AND METHYL LINOLEATE. (Letter to the Editor)
Howard M. Teeter and John C. Cowan.
J. Oil & Colour Chemists' Assoc. 32(351): 473. September 1949.

1074 REACTIONS OF DIENOPHILES WITH VEGETABLE OILS. I. REACTIONS OF MALEIC ESTERS WITH SULFUR DIOXIDE CATALYST.
W. R. Miller, E. W. Bell, J. C. Cowan, and H. M. Teeter.
J. Am. Oil Chemists' Soc. 36(9): 394-397. September 1959.

354 THERMAL DECOMPOSITION OF DI-N-BUTYL MALEATE.
William R. Miller and H. M. Teeter.
J. Org. Chem. 24(11): 1816-1817. November 1959.

1217 (89-C) SAFFLOWER OIL ADDUCTS AS PLASTICIZERS.
H. M. Teeter, J. C. Cowan, L. E. Gast, W. J. Yurgen,[3] and R. A. Clark.[1,3]
J. Am. Oil Chemists' Soc. 38(3): 117-120. March 1961.

1250 PRESSURE REACTION OF MALEIC ESTERS WITH VEGETABLE OILS.
W. R. Miller, E. W. Bell, J. C. Cowan, and H. M. Teeter.
J. Am. Oil Chemists' Soc. 38(5): 235-237. May 1961.

190 * REACTIONS OF CONJUGATED FAT ACIDS. I. ADDITION OF CROTONIC ACID DERIVATIVES.
Howard M. Teeter, Charles R. Scholfield, and John C. Cowan.
Oil & Soap 23(7): 216-219. July 1946.

837 REACTIONS OF CONJUGATED FATTY ACIDS. III. KINETICS OF THE DIELS-ALDER REACTION.
L. E. Gast, E. W. Bell, and H. M. Teeter.
J. Am. Oil Chemists' Soc. 33(6): 278-281. June 1956.

896 * REACTIONS OF CONJUGATED FATTY ACIDS. IV. DIELS-ALDER ADDUCTS OF 9,11-OCTADECADIENOIC ACID.
H. M. Teeter, J. L. O'Donnell, W. J. Schneider, L. E. Gast, and M. J. Danzig.
J. Org. Chem. 22(5): 512-514. May 1957.

892 * REACTIONS OF CONJUGATED FATTY ACIDS. V. PREPARATION AND PROPERTIES OF DIELS-ALDER ADDUCTS AND THEIR ESTERS FROM TRANS,TRANS-CONJUGATED FATTY ACIDS DERIVED FROM SOYBEAN OIL.
M. J. Danzig, J. L. O'Donnell, E. W. Bell, J. C. Cowan, and H. M. Teeter.
J. Am. Oil Chemists' Soc. 34(3): 136-138. March 1957.

---

[3] Battelle Memorial Institute, Columbus, Ohio.

963 REACTIONS OF CONJUGATED FATTY ACIDS. VI. SELENIUM CATALYSIS, A METHOD FOR PREPARING DIELS-ALDER ADDUCTS FROM CIS,TRANS-OCTADECADIENOIC ACID.
H. M. Teeter, E. W. Bell, J. L. O'Donnell, M. J. Danzig, and J. C. Cowan.
J. Am. Oil Chemists' Soc. 35(5): 238-240. May 1958.

976 REACTIONS OF CONJUGATED FATTY ACIDS. VII. CATALYTIC CYCLIZATION AND AROMATIZATION OF CIS,TRANS-OCTADECADIENOIC ACID WITH SELENIUM.
H. M. Teeter, E. W. Bell, and M. J. Danzig.
J. Org. Chem. 23(8): 1156-1158. August 1958.

977 REACTIONS OF CONJUGATED FATTY ACIDS. VIII. DIBASIC ACIDS BY HYDROGENATION AND OXIDATIVE CLEAVAGE.
C. R. Scholfield, E. P. Jones, J. A. Stolp, and J. C. Cowan.
J. Am. Oil Chemists' Soc. 35(8): 405-409. August 1958.

Polyesters, Polyamides, and Other Polymers

47 * VULCANIZABLE VEGETABLE-OIL POLYMERS.
Plastics Catalog, pp. 899-900. 1944.

49 * LINEAR SUPERPOLYESTERS FROM DILINOLEIC ACID.
John C. Cowan and Donald H. Wheeler.
J. Am. Chem. Soc. 66(1): 84-88. January 1944.

122 * POLYAMIDES FROM POLYMERIC FAT ACIDS.
L. B. Falkenburg, H. M. Teeter, P. S. Skell, and J. C. Cowan.
Oil & Soap 22(6): 143-148. June 1945.

541 POLYAMIDE RESINS FROM SOYBEANS.
John C. Cowan.
Yearbook Agr., U.S. Dept. Agr.: 566-568. 1950-1951.

16 * POLYMERIZATION OF DRYING OILS. [I] COMPARATIVE RATES OF POLYMERIZATION OF ESTERS OF ISOMERIC OCTADECATRIENOIC ACIDS AT 275°C. IN VACUUM.
Waldo C. Ault, J. C. Cowan, J. P. Kass, and J. E. Jackson.
Ind. Eng. Chem. 34(9): 1120-1123. September 1942.

211 * POLYMERIZATION OF DRYING OILS. [II] RUBBERLIKE PRODUCT FROM VEGETABLE OILS, NOREPOL.
J. C. Cowan, W. C. Ault, and H. M. Teeter.
Ind. Eng. Chem., Ind. Ed. 38(11): 1138-1144. November 1946.

301 POLYMERIZATION OF DRYING OILS. III. SOME OBSERVATIONS ON REACTION OF MALEIC ANHYDRIDE WITH METHYL OLEATE AND METHYL LINOLEATE.
H. M. Teeter, M. J. Geerts, and J. C. Cowan.
J. Am. Oil Chemists' Soc. 25(5): 158-162. May 1948.

385 POLYMERIZATION OF DRYING OILS. [IV] RUBBERLIKE PRODUCTS FROM POLYMERIC FAT ACIDS.
J. C. Cowan, D. H. Wheeler, H. M. Teeter, R. E. Paschke, C. R. Scholfield, A. W. Schwab, J. E. Jackson, W. C. Bull, F. R. Earle, R. J. Foster, W. C. Bond, R. E. Beal, P. S. Skell, I. A. Wolff, and C. Mehltretter.
Ind. Eng. Chem. 41(8): 1647-1653. August 1949.

406 POLYMERIZATION OF DRYING OILS. V. FURTHER OBSERVATIONS ON THE REACTION OF UNSATURATED DIBASIC ANHYDRIDES WITH METHYL LINOLEATE.
H. M. Teeter, U. S. Kini, R. A. Myren, and J. C. Cowan.
J. Am. Oil Chemists' Soc. 26(11): 660-663. November 1949.

605 POLYMERIZATION OF DRYING OILS. VI. CATALYTIC POLYMERIZATION OF FATTY ACIDS AND ESTERS WITH BORON TRIFLUORIDE AND HYDROGEN FLUORIDE.
C. B. Croston, I. L. Tubb, J. C. Cowan, and H. M. Teeter.
J. Am. Oil Chemists' Soc. 29(8): 331-333. August 1952.

Vinyl Polymers

852 REACTIONS OF UNSATURATED FATTY ALCOHOLS. I. PREPARATION AND PROPERTIES OF SOME VINYL ETHERS.
H. M. Teeter, E. J. Dufek, C. B. Coleman, C. A. Glass, E. H. Melvin, and J. C. Cowan.
J. Am. Oil Chemists' Soc. 33(9): 399-404. September 1956.

897 REACTIONS OF UNSATURATED FATTY ALCOHOLS. II. POLYMERIZATION OF VINYL ETHERS AND FILM PROPERTIES OF POLYMERS.
W. J. Schneider, L. E. Gast, E. H. Melvin, C. A. Glass, and H. M. Teeter.
J. Am. Oil Chemists' Soc. 34(5): 244-247. May 1957.

898 REACTIONS OF UNSATURATED FATTY ALCOHOLS. III. VISCOSITY AND MOLECULAR WEIGHT STUDIES ON SOME VINYL ETHER POLYMERS.
L. E. Gast, W. J. Schneider, and H. M. Teeter.
J. Am. Oil Chemists' Soc. 34(6): 307-310. June 1957.

1029 REACTIONS OF UNSATURATED FATTY ALCOHOLS. IV. OXIDATIVE DEGRADATION OF LAURYL ISOPROPYL ETHER.
L. E. Gast, C. B. Coleman, and H. M. Teeter.
J. Org. Chem. 24(2): 160-165. February 1959.

974 REACTIONS OF UNSATURATED FATTY ALCOHOLS. V. PREPARATION AND PROPERTIES OF SOME COPOLYMERS OF UNSATURATED FATTY VINYL ETHERS WITH LOWER ALKYL VINYL ETHERS.
L. E. Gast, Wilma J. Schneider, J. L. O'Donnell, J. C. Cowan, and H. M. Teeter.
J. Am. Oil Chemists' Soc. 35(7): 347-350. July 1958.

1012 REACTIONS OF UNSATURATED FATTY ALCOHOLS. VI. GUERBET REACTION OF SOYBEAN AND LINSEED ALCOHOLS.
L. E. Gast, E. D. Bitner, J. C. Cowan, and H. M. Teeter.
J. Am. Oil Chemists' Soc. 35(12): 703-707. December 1958.

1093 REACTIONS OF UNSATURATED FATTY ALCOHOLS. VII. POLYMERIZATION OF VINYL ETHERS CATALYZED BY STANNIC AND FERRIC CHLORIDES.
E. J. Dufek, R. A. Awl, L. E. Gast, J. C. Cowan, and H. M. Teeter.
J. Am. Oil Chemists' Soc. 37(1): 37-40. January 1960.

1099 REACTIONS OF UNSATURATED FATTY ALCOHOLS. VIII. PREPARATION AND PROPERTIES OF SOME COPOLYMERS OF NONCONJUGATED LINSEED VINYL ETHER AND LOWER ALKYL VINYL ETHERS.
L. E. Gast, Wilma J. Schneider, J. L. O'Donnell, and H. M. Teeter.
J. Am. Oil Chemists' Soc. 37(2): 78-80. February 1960.

1189 REACTIONS OF POLYUNSATURATED FATTY ALCOHOLS. IX. MOLECULAR-WEIGHT DISTRIBUTION OF SOME CONJUGATED SOYBEAN VINYL ETHER HOMOPOLYMERS.
H. M. Teeter, L. C. Dorman, and L. Harris.
J. Am. Oil Chemists' Soc. 37(11): 552-555. November 1960.

1190 REACTIONS OF UNSATURATED FATTY ALCOHOLS. X. PREPARATION OF SOME COPOLYMERS OF NONCONJUGATED LINSEED VINYL ETHER.
W. J. DeJarlais and H. M. Teeter.
J. Am. Oil Chemists' Soc. 37(11): 556-558. November 1960.

1249 [REACTIONS OF UNSATURATED FATTY ALCOHOLS. XI] PREPARATION OF SOME ETHYL HIGHER-ALKYL ACETALS AND THEIR CONVERSION TO VINYL ETHERS.
W. J. DeJarlais, J. L. O'Donnell, and H. M. Teeter.
J. Am. Oil Chemists' Soc. 38(5): 241-243. May 1961.

1166 (78-C) REACTIONS OF UNSATURATED FATTY ALCOHOLS. XII. POLYMERS FROM POLYUNSATURATED FATTY VINYL ETHERS AND CERTAIN CROSS-LINKING MONOMERS.
L. E. Gast, R. J. Stenberg, Wilma J. Schneider, and H. M. Teeter; H. O. Schoen,[3] B. G. Brand,[3] and E. R. Mueller.[1,3]
Offic. Dig. Federation Soc. Paint Technol. 32(427): 1091-1101. August 1960.

1040 DETERMINATION OF COMPOSITION OF VINYL COPOLYMERS BY INFRARED.
Curtis A. Glass and Eugene H. Melvin.
J. Am. Oil Chemists' Soc. 36(3): 100-101. March 1959.

1098 IMPROVED PROCESS FOR THE PREPARATION OF CONJUGATED SOYBEAN AND LOWER ALKYL VINYL ETHER COPOLYMERS BY FLASH POLYMERIZATION.
G. C. Mustakas, M. C. Raether, and E. L. Griffin, Jr.
J. Am. Oil Chemists' Soc. 37(2): 68-72. February 1960.

1097 PREPARATION OF VINYL ETHER MONOMERS FROM CONJUGATED SOYBEAN ALCOHOL.
G. C. Mustakas, M. C. Raether, and E. L. Griffin, Jr.
J. Am. Oil Chemists' Soc. 37(2): 100-103. February 1960.

1188 NONCONJUGATED LINSEED VINYL ETHER BY VINYL TRANSETHERIFICATION. PREPARATION PROCEDURE.
O. L. Brekke and L. D. Kirk.
J. Am. Oil Chemists' Soc. 37(11): 568-570. November 1960.

30-C SOME REACTIVITY RATIOS OF ESTERS OF ACRYLIC ACID.
C. S. Marvel and Roland Schwen, University of Illinois, Urbana.[1]
J. Am. Chem. Soc. 79(22): 6003-6005. November 1957.

34-C REACTIVITY RATIOS OF VINYL ESTERS OF ALIPHATIC ACIDS AND SOME COMMON VINYL MONOMERS.
C. S. Marvel and W. G. DePierri, University of Illinois, Urbana.[1]
J. Polymer Sci. 27(115): 39-58. January 1958.

39-C * COPOLYMERIZATION OF TRIALKYL ACONITATES WITH VINYLIDENE CHLORIDE.
C. S. Marvel and Eloisa B. Mano, University of Illinois, Urbana.[1]
J. Polymer Sci. 31(122): 165-171. August 1958.

43-C POLYMERS AND COPOLYMERS OF HYDRONOPYL ACRYLATE.
C. S. Marvel, Roland Schwen, R. W. Hobson, and R. J. Coleman, University of Illinois, Urbana.[1]
J. Polymer Sci. 38(136): 27-37. December 1958.

44-C DIMETHYL DITHIOFUMARATE AND SOME COPOLYMERIZATION REACTIONS.
C. S. Marvel and J. F. Porter, University of Illinois, Urbana.[1]
J. Org. Chem. 24(1): 137-138. January 1959.

45-C VINYL PINONATE-VINYL CHLORIDE COPOLYMERS.
C. S. Marvel and Eugene D. Vessel, University of Illinois, Urbana;[1] and F. C. Magne.[4]
J. Polymer Sci. 36(130): 35-39. April 1959.

46-C POLYMERIZATION REACTIONS OF ITACONIC ACID AND SOME OF ITS DERIVATIVES.
C. S. Marvel and Thomas H. Shepherd, University of Illinois, Urbana.[1]
J. Org. Chem. 24(5): 599-605. May 1959.

47-C CHAIN TRANSFER CONSTANTS OF VINYL ESTERS WITH TOLUENE.
C. F. Thompson, University of Illinois, Urbana;[1]
W. S. Port,[5] and L. P. Witnauer.[5]
J. Am. Chem. Soc. 81(10): 2552-2555. May 1959.

58-C POLYALLOOCIMENE.
C. S. Marvel, P. E. Kiener, and E. D. Vessel, University of Illinois, Urbana.[1]
J. Am. Chem. Soc. 81(17): 4694-4697. September 1959.

63-C * POLYMERIZATION OF β-PINENE WITH ZIEGLER-TYPE CATALYSTS.
C. S. Marvel, James R. Hanley, Jr., and Daniel T. Longone, University of Illinois, Urbana.[1]
J. Polymer Sci. 40(137): 551-555. November 1959.

79-C POLYMERIZATION REACTIONS OF THE ACRYLATE AND METHACRYLATE ESTERS OF ALCOHOLS FROM JOJOBA OIL.
C. S. Marvel, David M. Paisley, and Ghazi M. A. Khattab, University of Illinois, Urbana;[1] W. G. Bickford[4] and Sara P. Fore.[4]
J. Polymer Sci. 44(144): 289-294. June 1960.

81-C COPOLYMERS OF VINYL CHLORIDE AND SOME VINYL ESTERS OF ACIDS DERIVED FROM PINENE.
C. S. Marvel and Yukio Shimura, University of Illinois, Urbana;[1] and F. C. Magne.[4]
J. Polymer Sci. 45(145): 13-24. July 1960.

---

[4] Southern Regional Research Laboratory, New Orleans, La.

[5] Eastern Regional Research Laboratory, Philadelphia, Pa.

80-C POLYMYRCENE.
C. S. Marvel and Charles C. L. Hwa, University of Illinois, Urbana.[1]
J. Polymer Sci. 45(145): 25-34. July 1960.

87-C VINYL OCTADECYL ETHER COMPOLYMERS.
J. F. Dunphy and C. S. Marvel, University of Illinois, Urbana.[1]
J. Polymer Sci. 46(148): 542-543. October 1960.

88-C CATIONIC COPOLYMERIZATION OF SOME α-METHYLSTYRENES WITH VINYL 2-CHLOROETHYL ETHER. SOLVENT EFFECTS.
C. S. Marvel and James F. Dunphy, University of Illinois, Urbana.[1]
J. Org. Chem. 25(12): 2209-2211. December 1960.

93-C THE PREPARATION AND POLYMERIZATION OF SOME LONG-CHAIN MONO-, DI-, and TRIOLEFINS WITH METAL COORDINATION CATALYSTS.
C. S. Marvel and John R. Rogers, University of Illinois, Urbana.[1]
J. Polymer Sci. 49(152): 335-352. February 1961.

Oxidation and Ozonization

678 SYNTHETIC LUBRICANTS FROM HYDROXYSTEARIC ACIDS.
H. M. Teeter, L. E. Gast, E. W. Bell, and J. C. Cowan.
Ind. Eng. Chem. 45(8): 1777-1779. August 1953.

742 SYNTHETIC LUBRICANTS FROM POLYHYDROXYSTEARIC ACIDS.
L. E. Gast, C. B. Croston, W. J. Schneider, and H. M. Teeter.
Ind. Eng. Chem. 46(10): 2205-2208. October 1954.

365 * REACTIONS OF TERT-BUTYL HYPOCHLORITE WITH VEGETABLE OILS AND DERIVATIVES. [I] SOYBEAN OIL.
H. M. Teeter, R. C. Bachmann, E. W. Bell, and J. C. Cowan.
Ind. Eng. Chem. 41(4): 849-852. April 1949.

402 REACTION OF TERTIARY BUTYL HYPOCHLORITE WITH VEGETABLE OILS AND THEIR DERIVATIVES. II. METHYL OLEATE.
Howard M. Teeter and John E. Jackson.
J. Am. Oil Chemists' Soc. 26(10): 535-540. October 1949.

423 * REACTIONS OF TERTIARY BUTYL HYPOCHLORITE WITH VEGETABLE OILS AND THEIR DERIVATIVES. III. CHLORINATION OF SOYBEAN OIL IN THE PILOT PLANT.
E. W. Bell and H. M. Teeter.
J. Am. Oil Chemists' Soc. 27(3): 102-105. March 1950.

489 REACTIONS OF TERTIARY BUTYL HYPOCHLORITE WITH VEGETABLE OILS AND THEIR DERIVATIVES. IV. CONVERSION OF ALKYL OLEATES AND METHYL LINOLEATE TO DERIVATIVES OF KETO-STEARIC ACIDS.
Howard M. Teeter, Lyle E. Gast, Dolores Raleigh, and Lyle C. Woods.
J. Am. Chem. Soc. 73(5): 2302-2303. May 1951.

610 REACTIONS OF TERTIARY BUTYL HYPOCHLORITE WITH VEGETABLE OILS AND THEIR DERIVATIVES. V. DECHLORINATION OF CHLORINATED SOYBEAN OIL WITH AQUEOUS SOLUTIONS OF SALTS.
H. M. Teeter and R. A. Myren.
J. Am. Oil Chemists' Soc. 29(9): 367-370. September 1952.

640 REACTIONS OF t-BUTYL HYPOCHLORITE WITH VEGETABLE OILS AND THEIR DERIVATIVES. VI. DECHLORINATION OF METHYL ALKOXYCHLOROSTEARATES WITH ALKALI.
Lyle E. Gast, Dolores R. Zilch, Lyle C. Woods, and Howard M. Teeter.
J. Am. Chem. Soc. 74(24): 6280-6281. December 1952.

624 REACTIONS OF TERTIARY BUTYL HYPOCHLORITE WITH VEGETABLE OILS AND THEIR DERIVATIVES. VII. PARTIAL CHLORINATION OF SOYBEAN OIL.
H. M. Teeter, E. W. Bell, and L. C. Woods.
J. Am. Oil Chemists' Soc. 29(10): 401-402. October 1952.

642 * TERT-BUTYL HYPOCHLORITE.
H. M. Teeter and E. W. Bell.
In Organic Syntheses. Vol. 32. Richard T. Arnold, ed.-in-chief, pp. 20-22. New York. 1952.

692 PEROXIDES FROM AUTOXIDIZED METHYL OLEATE AND LINOLEATE, AS INITIATORS IN THE PREPARATION OF BUTADIENE-STYRENE SYNTHETIC RUBBER.
Daniel Swern,[5] Joseph E. Coleman,[5] H. B. Knight,[5] K. T. Zilch, H. J. Dutton, J. C. Cowan, and J. M. Gyenge.[6]
J. Polymer Sci. 11(5): 487-490. November 1953.

---

[6] Government Laboratories, The University of Akron, Akron, Ohio.

17 * THE DIASTEREOISOMERISM OF 9,10,12-TRIHYDROXYSTEARIC ACIDS AND THE GEOMETRIC CONFIGURATION OF RICINOLEIC AND RICINELAIDIC ACIDS.
J. P. Kass and S. B. Radlove.
J. Am. Chem. Soc. 64(10): 2253-2257. October 1942.

1327 ALKALINE CLEAVAGE OF A HOMOLOG OF RICINOLEIC ACID.
M. O. Bagby.
J. Org. Chem. 26(11): 4735-4736. November 1961.

1135 THE OZONIZATION OF METHYL OLEATE.
E. H. Pryde, D. E. Anders, H. M. Teeter, and J. C. Cowan.
J. Org. Chem. 25(4): 618-621. April 1960.

1208 POLYESTERS FROM 3,9-BIS(7-CARBOMETHOXYHEPTYL)-2,4,8,10-TETRAOXASPIRO[5.5]UNDECANE. A NEW METHOD OF CROSS LINKING POLYESTERS.
E. H. Pryde, R. A. Awl, H. M. Teeter, and J. C. Cowan.
J. Org. Chem. 25(12): 2260. December 1960.

1267 OZONIZATION OF SOYBEAN OIL. THE PREPARATION AND SOME PROPERTIES OF ALDEHYDE OILS.
E. H. Pryde, D. E. Anders, H. M. Teeter, and J. C. Cowan.
J. Am. Oil Chemists' Soc. 38(7): 375-379. July 1961.

Soybean Oil Paints

8-SBL * SOYBEAN OIL VARNISHES.
A. J. Lewis and K. S. Markley.[2]
Paint Oil Chem. Rev. 99(26): 5. December 23, 1937.

26-SBL * THE UTILIZATION OF SOYBEAN OIL IN PAINTS AND VARNISHES.
A. J. Lewis and K. S. Markley.[2]
Paint Oil Chem. Rev. 100(22): 8-9. October 27, 1938.
RSLM-36. 1938. 6 pp. [Processed]

46-SBL * COMPARATIVE DURABILITY OF SOYBEAN AND OTHER OIL VARNISHES.
A. J. Lewis.[2]
Paint Oil Chem. Rev. 102(2): 9-10. April 25, 1940.

62-SBL * SOYBEAN OIL TRAFFIC PAINT PROBABLE.
R. T. Milner.[2]
Soybean Dig. 1(2): 2. December 1940.

73-SBL * COMPARATIVE DURABILITY OF SOYBEAN, SOYBEAN-PERILLA, AND LINSEED OIL PAINTS.
A. J. Lewis.[2]
Oil Paint Drug Reptr. 140(8): 5, 38. August 25, 1941.

94-SBL * GLOSS RETENTION AND WOOD PROTECTION MERITS OF PHENOLIC RESIN-SOYBEAN OIL VARNISHES.
A. J. Lewis.[2]
Paint Oil Chem. Rev. 104(2): 7-8. January 15, 1942.

318 * PAINTS FROM SOYBEAN OIL.
A. J. Lewis.
Soybean Dig. 9(3): 16-17. January 1949.
AIC-199. July 1948. 3 pp. [Processed]

395 * CALCIUM OXIDE-SOYBEAN OIL PAINTS HAVING REDUCED TACK AND INCREASED DURABILITY.
A. J. Lewis, J. C. Cowan, and N. C. Schieltz.
J. Am. Oil Chemists' Soc. 26(9): 488-492. September 1949.

549 VARNISHES AND PAINTS FROM SOYBEANS.
A. J. Lewis.
Yearbook Agr., U.S. Dept. Agr.: 569-574. 1950-1951.
Paint Ind. Mag. 68(2): 7-10. February 1953.

785 EVALUATION OF "HYSOY" IN EXTERIOR PAINTS.
A. J. Lewis, H. M. Teeter, W. T. Walton,[7] and R. S. Haines.[7]
J. Am. Oil Chemists' Soc. 32(5): 300-302. May 1955.

Coatings

501 DRYING OILS FROM XYLITOL.
H. M. Teeter, E. W. Bell, and J. C. Cowan.
J. Am. Oil Chemists' Soc. 28(7): 299-300. July 1951.

497 * TOBACCOSEED OIL IN SURFACE COATINGS. A COMPARISON WITH SOYABEAN AND LINSEED OILS.
M. N. Rao, C. E. McGrew, and A. J. Lewis.
Paint Technol. 16(186): 241-244. June 1951.

508 * TOBACCOSEED OIL IN VARNISHES: A COMPARISON WITH LINSEED OIL.
M. N. Rao, C. E. McGrew, and A. J. Lewis.
Paint Technol. 16(188): 337-341. August 1951.

9-C * RESEARCH--THE KEY TO FUTURE MARKETS FOR DRYING OILS.
Odin Wilhelmy, Jr., and Harry W. Barr, Jr., Battelle Memorial Institute, Columbus, Ohio.[1]
J. Am. Oil Chemists' Soc. 32(4): 204-207. April 1955.

---

[7] Paint Research Associates Inc., Chicago, Ill.

10-C THE MARKET POTENTIAL FOR FATS AND OILS IN DRYING-OIL USES.
Odin Wilhelmy, Jr., and Harry W. Barr, Jr., Battelle Memorial Institute, Columbus, Ohio.[1]
U.S. Dept. Agr. Mkt. Serv., Mkt. Res. Reptr. No. 90. April 1955. 126 pp.

1232 * PROGRESS IN RESEARCH ON LINSEED OIL AT THE NORTHERN REGIONAL RESEARCH LABORATORY.
J. C. Cowan.
Proc. Flax Inst. U.S., Fargo, N. D., pp. 5-7. November 1959; Proc. Can. Barley Oil Seeds Conf., Winnipeg, Man., pp. 28-34. February 1960.

1209 * PROGRESS IN RESEARCH ON LINSEED OIL EMULSIONS AT THE NORTHERN REGIONAL RESEARCH LABORATORY.
J. C. Cowan.
Proc. Flax Inst. U.S., Fargo, N. D., pp. 9-10. November 1960.

1244 SURFACE DRYING OF LINSEED OIL EMULSION PAINTS.
A. W. Schwab, W. L. Kubie, J. A. Stolp, J. C. Cowan, and H. M. Teeter.
Offic. Dig. Federation Soc. Paint Technol. 33(437): 747-758. June 1961.

1329 * LINSEED OIL EMULSION PAINTS: PROGRESS DURING 1960-61 AT THE NORTHERN REGIONAL RESEARCH LABORATORY.
J. C. Cowan.
Proc. Flax Inst. U.S., Minneapolis, Minn., pp. 33-35. November 1961.

55 * NORELAC--A PROPOSED NEW SYNTHETIC COATING MATERIAL.
J. C. Cowan, A. J. Lewis, and L. B. Falkenburg.
Oil & Soap 21(4): 101-107. April 1944.

63 * NORELAC--A NEW THERMOPLASTIC POLYMER FOR PACKAGING.
J. C. Cowan, A. W. Schwab, and L. B. Falkenburg.
Mod. Packaging 17(9): 113-119. May 1944.

148 * NORELAC--A NEW RESIN DERIVED FROM SOYBEAN OIL.
L. B. Falkenburg and J. C. Cowan.
Soybean Dig. 5(12): 8-9. October 1945.

592 THE UTILIZATION OF NORELAC RESINS IN PROTECTIVE COATINGS.
A. J. Lewis, L. B. Falkenburg, and J. C. Cowan.
Paint Oil Chem. Rev. 115(13): 13-14, 16-17. June 19, 1952.

1002 PROMISING MATERIALS FOR PROTECTIVE COATINGS.
VINYL ETHERS OF POLYUNSATURATED FATTY ALCOHOLS.
H. M. Teeter, L. E. Gast, and J. C. Cowan.
Ind. Eng. Chem. 50(11): 1703-1704. November 1958.

1022 VINYL ETHER COPOLYMERS. NEW POTENTIAL COATINGS FROM SOYBEAN AND LINSEED OILS.
H. M. Teeter, L. E. Gast, and J. C. Cowan.
Paint Ind. Mag. 74(1): 13-14, 16-17. January 1959.

84-C YELLOWING OF OIL FILMS.
O. S. Privett, M. L. Blank, J. B. Covell, and W. O. Lundberg, The Hormel Institute, University of Minnesota, Austin.[1]
J. Am. Oil Chemists' Soc. 38(1): 22-27. January 1961.

Testing Methods

47-SBL * CONTINUAL OBSERVATION OF CHANGES IN WEIGHT AT OVEN TEMPERATURES. AN APPARATUS FOR USE IN THE STUDY OF DRYING RATES AND IN THE OXIDATION OF OILS.
A. C. Beckel and A. G. Sharp.[2]
Ind. Eng. Chem., Anal. Ed. 12(1): 45-47. January 1940.

52 * ANALYSIS OF BODIED DRYING AND SEMIDRYING OILS.
J. C. Cowan, L. B. Falkenburg, and H. M. Teeter.
Ind. Eng. Chem., Anal. Ed. 16(2): 90-92. February 1944.

133 * SIMPLIFIED WVP TEST OF PAPERS AND FILMS.
A. W. Schwab, L. B. Falkenburg, and J. C. Cowan.
Mod. Packaging 18(12): 141-143. August 1945.

1064 DEVICE TO ESTABLISH DRYING CONDITIONS FOR PROTECTIVE COATINGS AT ELEVATED TEMPERATURES.
A. W. Schwab, H. M. Teeter, and J. C. Cowan.
J. Am. Oil Chemists' Soc. 36(7): 275-277. July 1959.
Am. Paint J. 44(12): 96, 98-99, 102-103, 105-106. December 1959.
Offic. Dig. Federation Soc. Paint Technol. 32(422): 351-359. March 1960.

1084 RESEARCH METHODS OF ANALYSIS OF DRYING OILS.
Herbert J. Dutton.
J. Am. Oil Chemists' Soc. 36(10): 513-518. October 1959.

84-C AN ACCELERATED TEST OF THE YELLOWING TENDENCY OF DRYING OILS.
O. S. Privett, M. L. Blank, and W. O. Lundberg, The Hormel Institute, University of Minnesota, Austin.[1]
J. Am. Oil Chemists' Soc. 38(1): 27-30. January 1961.

77-SBL * THE MELTING POINTS OF BINARY MIXTURES OF OLEIC, LINOLEIC, AND LINOLENIC ACIDS.
H. W. Stewart and D. H. Wheeler.[2]
Oil & Soap 18(4): 69-71. April 1941.

1071 LINOLEIC ACID FROM SAFFLOWER OIL BY LIQUID-LIQUID EXTRACTION.
R. E. Beal and O. L. Brekke.
J. Am. Oil Chemists' Soc. 36(9): 397-400. September 1959.

1238 FATTY ACIDS. INFORMATION ON LINOLEIC ACID.
[R. E. Beal]
CA-N-16. May 1961. 2 pp. [Processed]

1237 FATTY ACIDS. INFORMATION ON LINOLENIC ACID.
[R. E. Beal]
CA-N-15. May 1961. 2 pp. [Processed]

127 * ALLYLIC ESTERS OF POLYMERIC FAT ACIDS.
H. M. Teeter and J. C. Cowan.
Oil & Soap 22(7): 177-180. July 1945.

228 * C-18 ALCOHOL ESTERS OF ORTHOSILICIC ACID.
L. B. Falkenburg, H. M. Teeter, and J. C. Cowan.
J. Am. Chem. Soc. 69(3): 486-487. March 1947.

320 * BROMINATION OF METHYL ESTERS OF SOYBEAN FAT ACIDS AND METHYL LINOLEATE WITH N-BROMOSUCCINIMIDE.
Howard M. Teeter.
J. Am. Oil Chemists' Soc. 25(7): 243-245. July 1948.

557 VAPOR PRESSURES AND DISTILLATION OF METHYL ESTERS OF SOME FATTY ACIDS.
Troy A. Scott, Jr., Duncan Macmillan, and Eugene H. Melvin.
Ind. Eng. Chem. 44(1): 172-175. January 1952.

621 COUNTERCURRENT DISTRIBUTION OF METHYL ESTERS OF HIGHER FAT ACIDS.
J. A. Cannon, K. T. Zilch, and H. J. Dutton.
Anal. Chem. 24(10): 1530-1532. October 1952.

830 VISCOMETRIC PROPERTIES OF HIGHER FATTY ACIDS AND THEIR DERIVATIVES.
Howard M. Teeter and John C. Cowan.
J. Am. Oil Chemists' Soc. 33(4): 163-169. April 1956.

887 APPLICATION OF THERMAL DIFFUSION TO SEPARATION OF ALIPHATIC ALCOHOLS AND FATTY ACIDS FROM THEIR MIXTURES.
C. W. Blessin, C. B. Kretschmer, and Richard Wiebe.
Anal. Chem. 29(3): 408-409. March 1957.

1092 PREPARATION OF PURE FATTY ACID METHYL ESTERS BY COUNTERCURRENT DISTRIBUTION.
C. R. Scholfield, Janina Nowakowska, and H. J. Dutton.
J. Am. Oil Chemists' Soc. 37(1): 27-30. January 1960.

1328 SEPARATION OF GEOMETRIC ISOMERS AND ISOLOGUES OF FATTY ACID ESTERS BY COUNTERCURRENT DISTIRBUTION.
H. J. Dutton, C. R. Scholfield, and E. P. Jones.
Chem. & Ind. (London) (46): 1874-1876. November 18, 1961.

566 MONOGLYCERIDES FROM SOYBEAN OIL BY HYDROLYSIS AND ESTERIFICATION.
R. E. Beal and N. H. Ludwig.
AIC-330. February 1952. 5 pp. [Processed]

653 THE AMADORI REARRANGEMENT UNDER NEW CONDITIONS AND ITS SIGNIFICANCE FOR NON-ENZYMATIC BROWNING REACTIONS.
John E. Hodge and Carl E. Rist.
J. Am. Chem. Soc. 75(2): 316-322. January 1953.

1036 MICROBIOLOGICAL PRODUCTION OF CAROTENOIDS. V. EFFECT OF LIPIDS AND RELATED SUBSTANCES ON PRODUCTION OF BETA-CAROTENE.
A. Ciegler, Margie Arnold, and R. F. Anderson.
Appl. Microbiol. 7(2): 98-101. March 1959.

1249 PREPARATION OF SOME ETHYL HIGHER-ALKYL ACETALS AND THEIR CONVERSION TO VINYL ETHERS.
W. J. DeJarlais, J. L. O'Donnell, and H. M. Teeter.
J. Am. Oil Chemists' Soc. 38(5): 241-243. May 1961.

1316 THE PREPARATION AND PROPERTIES OF POLYOXYETHYLENE METHYL GLUCOSIDE FATTY ESTERS.
F. H. Otey, T. E. Yeates, C. L. Mehltretter, and C. E. Rist.
J. Am. Oil Chemists' Soc. 38(10): 517-520. October 1961.

PATENTS ON CHEMICALLY MODIFIED OIL PRODUCTS
AND INDUSTRIAL USES

1936-1961

[These patents are assigned to the Secretary of Agriculture. Printed copies of patents may be obtained only by purchase (25 cents each) from the Commissioner of Patents, U.S. Patent Office, Washington 25, D.C. Order by number, do not send stamps.]

PROCESS FOR PRODUCING FATTY ACID POLYHYDRIC ESTERS FROM GLYCERIDES.
Warren H. Goss and Henry Fraser Johnstone.
U.S. Patent 2,290,609. July 21, 1942.

PLASTIC COMPOSITION.
Ralph H. Manley and Cyril D. Evans.
U.S. Patent 2,357,839. September 12, 1944.

PROCESS FOR PRODUCING POLYMERIC MATERIALS.
John C. Cowan and Waldo C. Ault.
U.S. Patent 2,373,015. April 3, 1945.

PLASTIC COMPOSITION AND METHOD OF PREPARING SAME.
John C. Cowan and Howard M. Teeter.
U.S. Patent 2,384,443. September 11, 1945.

PROCESS OF MAKING LINEAR SUPERPOLYESTERS.
John C. Cowan and Donald H. Wheeler.
U.S. Patent 2,429,219. October 21, 1947.

POLYAMIDES FROM POLYOCTADECAPOLYENYLAMINE.
Howard M. Teeter and John C. Cowan.
U.S. Patent 2,435,478. February 3, 1948.

POLYAMIDES FROM POLYMERIC FAT ACIDS.
John C. Cowan, Lee Bert Falkenburg, Howard M. Teeter, and Philip S. Skell.
U.S. Patent 2,450,940. October 12, 1948.

PROTECTIVE COATING COMPOSITIONS AND METHODS FOR PRODUCING THE SAME.
John C. Cowan and Howard M. Teeter.
U.S. Patent 2,477,116. July 26, 1949.

DIENE ADDITION PRODUCT AND PROCESS FOR MAKING IT.
Howard M. Teeter, Charles R. Scholfield, and John C. Cowan.
U.S. Patent 2,483,791. October 4, 1949.

PAINT COMPOSITIONS FROM CATALYTICALLY CONJUGATED OILS.
Arthur J. Lewis, Helen A. Moser, and John C. Cowan.
U.S. Patent 2,494,565. January 17, 1950.

MILDEW RESISTANT PAINTS.
Arthur J. Lewis.
U.S. Patent 2,517,580. August 8, 1950.

COATING COMPOSITIONS.
Lee Bert Falkenburg, Arthur J. Lewis, and John C. Cowan.
U.S. Patent 2,550,682. May 1, 1951.

COATING COMPOSITIONS FROM SOYBEAN OILS.
Arthur J. Lewis, Helen A. Moser, and John C. Cowan.
U.S. Patent 2,550,703. May 1, 1951.

HALOGENATED UNSATURATED HIGHER FATTY ACIDS AND DERIVATIVES.
Howard M. Teeter and John C. Cowan.
U.S. Patent 2,557,159. June 19, 1951.

SYNTHETIC RESINS FROM MALEIC ANHYDRIDE-ALKYL OLEATE ADDUCT AND AN ALKYLENE DIAMINE.
John C. Cowan and Howard M. Teeter.
U.S. Patent 2,582,235. January 15, 1952.

PREPARATION OF KETO ACID COMPOUNDS.
Lyle C. Woods and Howard M. Teeter.
U.S. Patent 2,589,314. March 18, 1952.

PREPARATION OF DRYING OILS.
Howard M. Teeter.
U.S. Patent 2,598,729. June 3, 1952.

METHOD OF BONDING SHEET MATERIALS AND COATING COMPOSITIONS THEREFOR.
John C. Cowan, Lee Bert Falkenburg, and Arthur J. Lewis.
U.S. Patent 2,630,397. March 3, 1953.

MODIFIED SOYBEAN LECITHIN.
Edwin P. Jones and John C. Cowan.
U.S. Patent 2,636,889. April 28, 1953.

POLYAMIDE RESINS.
Howard M. Teeter and John C. Cowan.
U.S. Patent 2,641,593. June 9, 1953.

ALKYL ACYLOXY STEARATES.
Howard M. Teeter and John C. Cowan.
U.S. Patent 2,652,411. September 15, 1953.

POLYMERIZATION PROCESS USING HYDROGEN FLUORIDE.
Clarence Bradford Croston, Howard M. Teeter, and John C. Cowan.
U.S. Patent 2,670,361. February 23, 1954.

COATING COMPOSITION STABILIZED WITH A CYANOETHYLATED PROTEIN.
Leonard L. McKinney, John C. Cowan, and Cyril D. Evans.
U.S. Patent 2,775,565. December 25, 1956.

ADDITION PRODUCTS OF CONJUGATED FATTY ACIDS AND ACETYLENE CARBOXYLIC ACID.
Howard M. Teeter and Morris J. Danzig.
U.S. Patent 2,819,299. January 7, 1958.

ALKYL ESTERS OF ALKOXY-ACYLOXY STEARIC ACID.
Lyle E. Gast, John C. Cowan, and Howard M. Teeter.
U.S. Patent 2,873,255. February 10, 1959.

PREPARATION OF PARTIAL GLYCERIDES.
Robert E. Beal.
U.S. Patent 2,885,414. May 5, 1959.

COATING COMPOSITIONS.
Howard M. Teeter, Wilma J. Schneider, and Lyle E. Gast.
U.S. Patent 2,889,309. June 2, 1959.

COATING COMPOSITIONS.
John C. Cowan and Howard M. Teeter.
U.S. Patent 2,901,469. August 25, 1959.

ADDITION PRODUCTS OF FATTY ACIDS AND UNSATURATED NITRO COMPOUNDS.
Howard M. Teeter, Morris J. Danzig, and John C. Cowan.
U.S. Patent 2,901,495. August 25, 1959.

SULFATED CHLOROALKANOL DETERGENTS.
John C. Cowan, James Knerr Weil, and Alexander James Stirton.
U.S. Patent 2,938,872. May 31, 1960.

PROTECTIVE COATING COMPOSITIONS FROM ALIPHATIC CONDENSED POLYUNSATURATED FATTY ALCOHOLS AND THEIR ESTERS.
Lyle E. Gast, John C. Cowan, and Howard M. Teeter.
U.S. Patent 2,952,556. September 13, 1960.

PREPARATION OF DECANOIC ACID FROM CUPHEA LLAVEA SEED.
Thomas K. Miwa, Cecil R. Smith, Jr., and Timothy L. Wilson.
U.S. Patent 2,964,546. December 13, 1960.

COPOLYMERIZATION METHOD.
Gus C. Mustakas, and Edward L. Griffin, Jr.
U.S. Patent 2,967,166. January 3, 1961.

METHOD OF PREPARING MONOMERIC CYCLIC UNSATURATED ACIDS.
Robert E. Beal.
U.S. Patent 3,005,840. October 24, 1961.